

REMARKS/ARGUMENTS

New dependent Claim 21 has been added. Support for new dependent Claim 21 is found in specification page 44 line 8 to continuing page 9 line 21 and Fig.2. No new matter has been added.

First, Applicants wish to thank Examiner Li for the courtesy of an interview granted to Applicants' representative on June 16, 2009, at which time the outstanding issues in this case were discussed. The present request for reconsideration flows from the discussion therein to help distinguish the present application from the references cited.

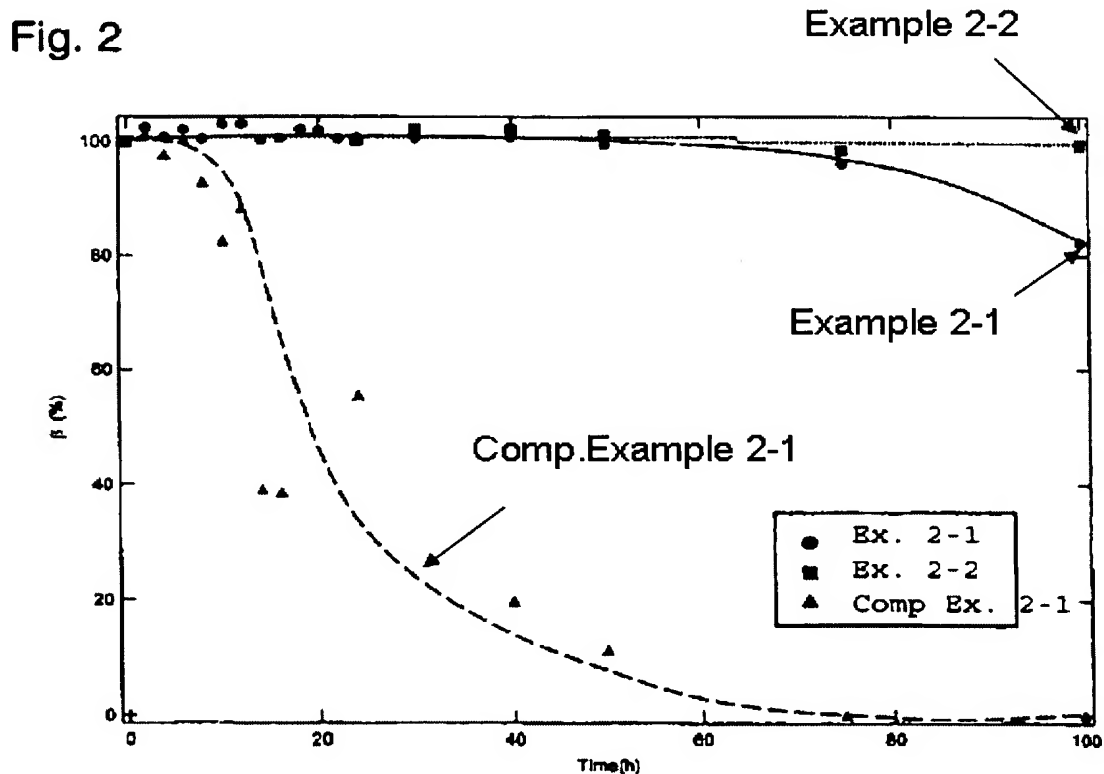
The rejection of Claim 1, 4, 5-6, 12-16, 17 and 18-20 under 35 U.S.C. 103(a) as being unpatentable over Ono (US4483940) in view of Giordano et al (Journal of the European Ceramic Society 2002, 22:1811-1822), Fukuda et al (JP 2002-145659) or Noda (US2001/0056034) is traversed because none of the references even in combination disclose or suggest a honeycomb carrier as presently claimed.

As the Office recognizes, Ono fails to specifically teach a honeycomb carrier of  $Mg_xAl_{2(1-x)}Ti_{(1+x)}O_5$  (wherein  $0 < x < 1$ ) with addition of alkali feldspar represented by  $(Na_yK_{1-y})AlSi_3O_8$  (wherein  $0 < y < 1$ ) as presently claimed (see, Office Action, page 2).

Giordano discloses  $Mg_xAl_{2(1-x)}Ti_{(1+x)}O_5$  (where  $x=0.1$  and  $x=0.5$ ) and Fukuda discloses aluminum titanate based sintered compact comprising alkali feldspar  $(Na_yK_{1-y})AlSi_3O_8$  (wherein  $0 \leq y \leq 1$ ). The Office asserts that Noda teaches "[t]he honeycomb carrier made from aluminum titanate with addition of Mg" (see, Office Action, page 5).

However, none of the secondary references cited cure the deficiencies of Ono because none of the references discloses a honeycomb carrier of  $Mg_xAl_{2(1-x)}Ti_{(1+x)}O_5$  (wherein  $0 < x < 1$ ) that also contains an alkali feldspar represented by  $(Na_yK_{1-y})AlSi_3O_8$  (wherein  $0 < y < 1$ ) as presently claimed.

Importantly, Applicants compare aluminum magnesium titanate (comparative example 2-1), aluminum titanate with alkali feldspar (example 2-1), and aluminum magnesium titanate with alkali feldspar (example 2-2), as presently claimed, and show that aluminum magnesium titanate with alkali feldspar (example 2-2) has the best thermal stability at 1000°C after 100 hours thermal treatment (see, page 45, lines 1-21 and Fig.2). For convenience Fig.2 of the specification is reproduced below (marks added).



Furthermore, the newly submitted declaration demonstrates that the superior thermal stability of the presently claimed honeycomb carrier intensifies as the test time progresses at a higher temperature.

Based on the examples of the specification and the examples of the declaration, “the superior thermal decomposition resistance shown herein for Example 1-1 should not have been foreseen based on the disclosures of Ono, Giordano, Fukuda and Nada” (See,

declaration page 3). Applicants submit that the examples showing significantly superior thermal resistance is obtained when alkali feldspar is present. New dependent claim 21 recites the thermal resistance properties of one embodiment of the invention.

Furthermore, Ono requires a coating of water-soluble organic compound on the surface of the ceramic honeycomb carrier (see, Col.2, lines 29-64, and Claim 1). In detail, Ono compares honeycomb carriers with and without the organic coating and teaches that only samples with organic coating show good high temperature stability (see, Table 1, Examples 1-6 and Control Examples 1-2). However, in Ono, nowhere is a honeycomb carrier as presently claimed disclosed that shows such a superior thermal stability.

Therefore, in light of teachings by Ono and the secondary references, one of ordinary skill in the art would not have been led to a honeycomb carrier of  $Mg_xAl_{2(1-x)}Ti_{(1+x)}O_5$  (wherein  $0 < x < 1$ ) that contains an alkali feldspar represented by  $(Na_yK_{1-y})AlSi_3O_8$  (wherein  $0 < y < 1$ ) as presently claimed and would not have foreseen the superior thermal stability of the presently claimed honeycomb carrier.

Withdrawal of this ground of rejection is requested.

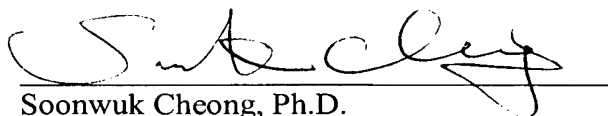
Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)

  
\_\_\_\_\_  
Soonwuk Cheong, Ph.D.  
Registration No. 62,793